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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,903	12/20/2000	Sang-Soo Lee	11349-P66227US0	4948

7590 08/27/2003

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EXAMINER

LI, SHI K

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 08/27/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/739,903

Applicant(s)

LEE ET AL.

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Republic of Korea on 21 December 1999. It is noted, however, that applicant has not filed a certified copy of the 1999-59760 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemecek et al. (U.S. Patent 5,953,139) in view of Horiuchi et al. (Y. Horiuchi et al., "Stimulated Brillouin Scattering Suppression Effects Induced by Cross-Phase Modulation in High Power WDM Repeaterless Transmission", Electronics Letters, Vol. 34, No. 4, 19th February 1998).

Nemecek et al. discloses in FIG. 1 an arrangement for suppressing Stimulated Brillouin Scattering (SBS). FIG. 1 comprises a plurality of optical transmitters 12, OSC 30 (equivalent to the supervisory signal) and a transmission means for phase modulating the information signal via phase modulator 16. The phase modulation broadens the spectral width of each channel and suppresses SBS. Regarding claims 1 and 5, the difference between Nemecek et al. and the claimed invention is that Nemecek et al. does not call the effect "cross phase modulation".

Horiuchi et al. explains in page 390, left col., second paragraph that modulating the WDM signal causes cross-phase modulation (XPM) which suppresses SBS. One of ordinary skill in the art

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would have been motivated to adopt the explanation of Horiuchi et al. to the arrangement of Nemecek et al. because Horiuchi et al. has provided experimental results as evidence. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to understand that the effect of the arrangement of Nemecek et al. is cross-phase modulation, as taught by Horiuchi et al., because Horiuchi et al. provides experimental results as evidence.

Regarding claims 2 and 6, Nemecek et al. further includes in FIG. 1 multiplexer 4, demultiplexer 22 and receiver 24. Horiuchi et al. teaches in FIG. 1 that a plurality of amplifiers can be used to restore the signal power level for long distance transmission. Horiuchi et al. further teaches to include a receiver for receiving the signal from the PPG.

Regarding claims 3-4 and 7-8, Nemecek et al. includes in FIG. 1 a circuit for control the level of modulation. Nemecek et al. only modulates the information signal.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Moeller et al. (U.S. Patent 6,580,539 B1) discloses a SBS suppression arrangement where spectrum is spread by phase modulation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 703 305-4341. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

skl



JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600